5.16 Relationship Between Short-Term Uses of the Environment and the Maintenance or Enhancement of Long-Term Productivity

For purposes of the HSW EIS, short-term use is defined to encompass the period through the year 2046; long-term productivity is defined to encompass the period following 2046.

The principal objective of Alternative Groups A through E (whether for the Hanford Only, Lower Bound, or Upper Bound waste volume)—namely, permanent disposal of LLW, MLLW, and ILAW—does not involve the short-term use of the environment in the usual sense.[(a)] Implementation of any of these alternatives is intended to result in permanent disposal by below-grade land burial, followed by backfilling to grade and capping with above-grade modified RCRA Subtitle C barriers. For all practical purposes, the LLBGs**,** and the vadose zone beneath and surrounding them, have been and will continue to be dedicated to isolation of radioactive and hazardous wastes from the environment. If selected, the disposal sites near the PUREX Plant, the ERDF, and the CWC, and the vadose zone beneath and surrounding them, would be similarly committed. Thus, these portions of the Hanford Site constitute perhaps the highest use in terms of long-term productivity.

In time, contaminants from past and proposed waste disposal on the Hanford Site would reach groundwater and the Columbia River. Depending on the location and time of interest, concentrations of nuclides in groundwater might be such that it would be necessary to place some restrictions on ground-water usage. When the contaminants reach the Columbia River, they will be in such small concentrations that they would pose no adverse impact on the long-term productivity of the Columbia River.

In time and with the absence of human activities, flora and fauna common to the Central Plateau in the past would likely reoccupy the surface areas above the disposed waste, and the surface would probably be indistinguishable from nearby undisturbed areas. However, prudence would dictate invoking land-use covenants to prohibit future land disturbance by humans and to reduce the likelihood of inadvertent intrusion into a waste site or dispersal of contaminants for as long as institutional controls can be maintained.

In the No Action Alternative, similar restrictions would apply; however, no conclusion is made regarding short-term uses versus long-term productivity because about 59,000 m^3 (76,700 yd^3) of waste would be stored until the year 2046, with no defined disposition path thereafter.

(a) An example of "usual sense" in this context would be a mining operation in which the acid mine drainage contaminates a nearby stream. In that case, the short-term mining operation would likely have adverse effects on the long-term productivity of the streams and river into which contamination flows.